

Technical data sheet

Version: September 2020

THERMO HEMP PREMIUM PLUS

The 100 % ecological insulation made of hemp fibres



Description	THERMO HEMP PREMIUM PLUS											
European Technical Approval	ETA-05/0037											
Reference number	130701-042-01											
Components	88 % hempfibers, 9 % polymeric support fiber based on PLA, 4 % soda											
Dimensional variations												
Length and Width (according to EN 822:2013)	length: ± 2 %, width: ± 1,5 %											
Thickness (according to EN 823:2013)	- 4 mm und + 10 mm / + 10 % (corresponds T3 according to EN 13171:2012, table 1)											
Bulk Density (according EN 1602:2013)	ca. 37kg/m³											
Tensile strength parallel to plate level (according to EN 1608:2013)	≥ 30 kPa											
Energy saving and heat insulation												
Thermal conductivity (according to EN 12667:2001)	0,043 W/(m•K)											
Declared thermal conductivity λ _{D(23,50)}												
Thermal conductivity for calculations [W/(m•K)]												
	0,046	0,045	0,043	0,043	0,043	0,043	0,043	0,043	0,043	0,043	0,043	0,045
Conversion factors for the moisture content (conversations by DIN EN ISO 10456:2007+AC:2009)	F _{m1} (dry to 23 °C/50 %) = 1,01											
	F _{m2} (23 °C/50 % to 23 °C/80 %) = 1,02											
Security surcharge (Germany-MVVTB)	γ = 1,03											
Specific thermal capacity c (according to EN 12667:2001)	2300 J/(kg•K)											
Water vapor diffusion resistance number μ (according to EN 12086:2013)	1 to 2											
Climate condition 23-50/93												
Water absorption (according to EN 1609:1996, Verfahren A)	≤ 4,2 kg/m²											
Soundproofing												
Declared level of airflow resistance (according to EN 29053:1993)	3,0 kPa•s/m2											
Sound absorption (according to EN ISO 354:2003 and EN ISO 11654:1997)	Nominal thickness [mm]	Practical levels of sound absorption α _p Evaluation after EN ISO 11654						Evaluation after EN ISO 11654				
		Octave center frequency [f/Hz]						Rated sound absorption level α _w	Sound absorber class			
		125	250	500	1000	2000	4000					
	40	0,2	0,45	0,70	0,85	0,90	0,95	0,7 (H)	C			
	160	0,85	1,00	1,00	1,00	1,00	1,00	1,00	A			
Fire protection												
Fire class according to EN 13501-1	E											
Maximum operating temperature	120 °C											
Hygiene, health and environmental protection												
Resistance against mold (according to EAD, appendix B)	Assessment level 0 (according to EN ISO 846:1997)											
Delivery form	Mat goods											
Standard dimensions	Timber construction: Thickness [mm]: 30, 40, 50, 60, 80, 100, 120, 140, 160, 180, 200, 220 Width [mm]: 580						Drywall construction: Thickness [mm]: 40, 60, 80 Width [mm] 625 mm					
Special dimensions	From 5 m³ of the same mats, we offer a custom-made width between 40 and 120 cm at no extra charge.											

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Description:

- Insulation with the European Technical Approval
- Flexible, mats or rolls made of durable, robust hemp fibres, not resistant to compression
- Produced with thermo bonding process and 100 % eco electricity
- Supporting fibres made of 100 % ecological raw materials

Characteristics:

- Best thermal insulation through low thermal conductivity
- Best heat protection in the summer through high heat storage capacity
- Good sound insulation properties
- Simple processing with the insulation knife or popular electric cutting tools with opposed serrated knives
- Suitable for DIY
- Humidity regulating due to its high moisture absorption capacity
- No nutrient base for rodents and insects

Fields of application:

- Insulation between the rafters
- Insulation on the rafters and between supporting rafters
- Insulation under the rafters
- Insulation of wooden joists in ceilings
- Insulation of the internal and external walls in timber frame, and post and beam constructions
- Insulation of metal studded constructions or partitions
- Internal dry-lining insulation in the refurbishment of masonry / solid constructions
- Exterior insulation behind cladding

General information:

- THERMO HEMP PREMIUM PLUS is to be stored and processed in dry conditions
- Store upright
- To ensure the installation is achieved without gaps (joints) please oversize the insulation with an extra 10–30 mm relative to the void to be insulated
- Ensure a suitable sealed vapour check is applied and that the construction is sealed air tightly immediately after the insulation is installed
- The specified properties and performance can only be assumed if the product is installed according to the processing guidelines of the manufacturer and is protected against precipitation, weathering and moisture in the installed state as well as during transport, storage and installations